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UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

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INTERNATIONAL BUSINESS MACHINES
CORPORATION,

Case No.: _____

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Plaintiff,

COMPLAINT FOR PATENT
INFRINGEMENT

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v.

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ZILLOW GROUP, INC., and ZILLOW, INC.,

JURY TRIAL DEMANDED

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Defendants.

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COMPLAINT
Case No.

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff International Business Machines Corporation ("IBM"), for its Complaint for Patent Infringement against Zillow Group, Inc. and Zillow, Inc. (collectively "Defendants" or "Zillow"), demands a trial by jury on all issues so triable and alleges as follows:

BACKGROUND

1.   IBM and Zillow are already involved in a pending lawsuit concerning Zillow's willful infringement of seven patents. That lawsuit was the result of Zillow's refusal to negotiate a license and end its unauthorized use of IBM's intellectual property after more than three years of unproductive discussions.

2.   This lawsuit is the result of Zillow's decision to escalate its behavior by willfully infringing five additional patents. On November 25, 2019, IBM sent a letter informing Zillow that it was infringing four of those new patents, and provided the detailed evidence of infringement attached to this Complaint as Exhibits 3, 5, 7, and 9. In response, Zillow dismissed IBM's letter as a "distraction" and refused to discuss—or even "acknowledge the receipt" of—evidence showing Zillow's infringement of any patents outside of litigation. IBM urged Zillow to reconsider its position and engage in negotiations for a license. On December 13, 2019, IBM informed Zillow that it was infringing the fifth new patent, and provided the detailed evidence of infringement attached to this Complaint as Exhibit 11. Again, IBM urged Zillow to reconsider its policy of willful blindness. True to its word, Zillow refused to respond to (or even acknowledge) that evidence of additional infringement. Zillow has given IBM no option but to litigate.

INTRODUCTION

3.   IBM is in the innovation business. Every year, IBM spends billions of dollars on research and development to invent, market, and sell new technology. For example, through its investments and innovations in the new frontier of quantum information science, IBM is the leader in commercializing quantum computing, once thought to be a purely academic exercise. IBM's Q

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1   Network service—a community of Fortune 500 companies, academic institutions, research

2   organizations, and startups working with IBM to advance quantum computing—now has over 100

3   members.

4   4.   IBM obtains patents on the technology its inventors develop. The United States

5   Patent Office awards thousands of patents to IBM each year. In fact, for each of the last 27 years,

6   the Patent Office has awarded IBM more patents than any other company. Each of those patents

7   grants IBM protection from those who would take its technology without permission. Those patents

8   are critical to IBM's business and its licensing philosophy.

9   5.   For over twenty years, IBM has been a strong proponent of open source technologies.

10 IBM was a founding member of Open Invention Network, the largest patent non-aggression

11 community in history, which supports freedom of action in Linux, a key element of open source

12 software. IBM has also pledged to provide open access to key innovations covered by hundreds of

13 IBM software patents for those working on open source software. And early in 2020, IBM joined

14 the License on Transfer Network ("LOT Network"), a non-profit community of companies that

15 supports open innovation and responsible stewardship of technology. LOT Network affirms the

16 traditional use of patents—safeguarding the innovations of companies who research, develop, and

17 sell new technologies—while protecting its members against companies who purchase or acquire

18 patents from others. In addition, in April 2020, IBM pledged to grant free access to its patent

19 portfolio to those developing technologies to help diagnose, prevent, contain or treat coronaviruses,

20 including the one that causes COVID-19. This pledge covers thousands of IBM AI patents,

21 including Watson technology patents, as well as dozens of active U.S. patents in the general area of

22 biological viruses.

23   6.   IBM also believes in the protection of its proprietary technologies, which result from

24 IBM's extensive investments in research and development and the hard work of IBM's employees.

25 IBM believes that companies who use IBM's patented technology should agree to a license and pay

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1   a fair royalty. When a company is using IBM's patents without authorization, IBM first seeks to

2   negotiate an agreement whereby IBM and the other company each receive a license to the other's

3   patent portfolio. That way, each company can avoid litigation, be fairly compensated for the use of

4   all of its patents, and maintain freedom to operate in its respective markets.

5   7.   IBM's research and development is currently focused on technology that includes

6   quantum computing, hybrid cloud solutions, security, big data analytics, artificial intelligence, and

7   natural language processing. But IBM also has a long history of innovating and licensing its

8   technology in the field of internet commerce. In fact, long before Zillow existed, IBM partnered

9   with other companies to launch Prodigy, one of the very first e-commerce services. Zillow, which

10   was founded in 2004, long after e-commerce was already established, took those prior innovations

11   made by IBM and others to create and run its new business.

12   8.   Dozens of similar companies, including Amazon, Apple, Google, and Facebook,

13   have agreed to cross licenses with IBM. Unfortunately, Zillow is not among them. Instead, Zillow

14   has chosen to willfully infringe the five patents in this lawsuit without even considering licensing

15   discussions. This lawsuit seeks to stop Zillow's continued and unauthorized use of IBM's patents.

16   <div align="center">**NATURE OF THE CASE**</div>

17   9.   This action arises under 35 U.S.C. § 271 for Zillow's infringement of IBM's United

18   States Patent Nos. 6,778,193 ("the '193 patent"), 6,785,676 ("the '676 patent"), 7,543,234 ("the '234

19   patent"), 9,569,414 ("the '414 patent"), and 10,115,168 ("the '168 patent") (collectively the

20   "Patents-In-Suit").

21   <div align="center">**THE PARTIES**</div>

22   10.   Plaintiff IBM is a New York corporation with its principal place of business at 1 New

23   Orchard Road, Armonk, New York 10504.

24   11.   Defendant Zillow Group is a Washington corporation with a principal place of

25   business at 1301 Second Avenue, Floor 31, Seattle, Washington 98101.

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12. Zillow Group "operates the largest portfolio of real estate and home-related brands on mobile and the web which focus on all stages of the home lifecycle: renting, buying, selling and financing."[1] Zillow Group provides a "comprehensive suite of marketing software and technology solutions to help real estate, rental, and mortgage professionals maximize business opportunities and connect with millions of consumers."[2] Zillow Group generates revenue at least based on the "sale of advertising under [its] Premier Agent and Premier Broker programs."[3] Zillow Group's portfolio of real estate and home-related brands includes Zillow. Zillow Group owns and completely controls Zillow, Inc.

13. Defendant Zillow, Inc. is a Washington corporation with a principal place of business at 1301 Second Avenue, Floor 31, Seattle, Washington 98101.

14. Zillow, Inc. operates the Zillow website, including at least www.zillow.com, www.zillowgroupmedia.com, and subdomains thereof, and the Zillow mobile applications, including at least the iOS and Android Zillow Real Estate & Rentals, Zillow Rentals, and Zillow Premier Agent applications. Zillow, Inc. provides online real estate listings and related services to consumers and local real estate agents through Zillow's website and through Zillow mobile applications.

JURISDICTION AND VENUE

15. IBM incorporates by reference paragraphs 1-14.

16. This action arises under the patent laws of the United States, including 35 U.S.C. § 271 *et seq.* The jurisdiction of this Court over the subject matter of this action is proper under 28 U.S.C. §§ 1331 and 1338(a).

17. Venue in the Western District of Washington is proper pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b). Zillow Group and Zillow, Inc. are entities organized under the laws

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[1] Ex. 1 (Zillow Group 2018 10-K) at 3.
[2] *Id.*
[3] *Id.*

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1   of Washington and reside in Washington for purposes of venue under 28 U.S.C. § 1400(b). Zillow

2   Group and Zillow, Inc. conduct business in Washington, at least by offering for sale and selling

3   products and services through Defendants' websites and mobile applications, which are accessible

4   in Washington. Infringement has occurred and continues to occur in Washington.

5   18.   Personal jurisdiction exists over Defendants because Zillow Group and Zillow, Inc.

6   are entities organized under the laws of Washington. Personal jurisdiction also exists over

7   Defendants because Zillow Group and Zillow, Inc. conduct business in Washington, at least by

8   offering for sale and selling products and services through Defendants' websites and mobile

9   applications, which are accessible in Washington, and because infringement has occurred and

10   continues to occur in Washington.

11   **FACTUAL BACKGROUND**

12   **A.   IBM Is A Recognized Innovator.**

13   19.   IBM is recognized throughout the world as a pioneer in many aspects of science and

14   technology. On ten occasions—more times than any other company or organization—IBM has been

15   awarded the U.S. National Medal of Technology, the nation's highest award for technological

16   innovation. During IBM's over 100-year history, IBM's employees have included six Nobel

17   laureates, five National Medal of Science recipients, and at least fourteen inventors in the National

18   Inventors Hall of Fame.

19   20.   These and other IBM employees have introduced the world to technology that the

20   global community takes for granted today, including the dynamic random access memory (DRAMs)

21   found in nearly all modern computers; magnetic disk storage (hard disk drives) found in computers

22   and portable music players; and some of the world's most powerful supercomputers, including Deep

23   Blue, the first computer to beat a reigning chess champion. IBM's commitment to developing these

24   types of advanced computing technologies has helped to usher in the information age.

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B.   IBM Is Committed To Protecting Its Innovations Through The Patent System.

21.   IBM's research and development operations differentiate IBM from many other companies. IBM annually spends billions of dollars for research and development. In addition to yielding inventions that have literally changed the way in which the world works, IBM's research and development efforts have resulted in more than 60,000 patents worldwide.

22.   Like the research upon which the patents are based, IBM's patents also benefit society. Indeed, the Supreme Court has recognized that the patent system encourages both the creation and the disclosure of new and useful advances in technology. Such disclosure, in turn, permits society to innovate further. And, as the Court has further recognized, as a reward for committing resources to innovation and for disclosing that innovation, the patent system provides patent owners with the exclusive right to prevent others from practicing the claimed invention for a limited period of time.

C.   IBM Routinely Licenses Its Patents In Many Fields But Will Enforce Its Rights
Against Those Who Use Its Intellectual Property Unlawfully.

23.   IBM's commitment to creating a large patent portfolio underscores the value that IBM places in the exchange of innovation, and disclosure of that innovation, in return for limited exclusivity. Indeed, IBM has used its patent portfolio to generate revenue and other significant value for the company by executing patent cross-license agreements. The revenue generated through patent licensing enables IBM to continue to commit resources to innovation. Cross licensing, in turn, provides IBM with the freedom to innovate and operate in a manner that respects the technology of others.

24.   Given the investment IBM makes in the development of new technologies and the management of its patent portfolio, IBM and its shareholders expect companies to act responsibly with respect to IBM's patents. IBM facilitates this by routinely licensing its patents in many fields and by working with companies that wish to use IBM's technology in those fields in which IBM

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1   grants licenses. When a company appropriates IBM's intellectual property but refuses to negotiate

2   a license, IBM has no choice but to seek judicial assistance.

3   **D.   IBM Invented Methods Of Improving Contextual Searching Using Visual**

4   **Workspaces.**

5   25.   The inventors of the '193 patent developed the patented technology as part of IBM's

6   efforts to improve graphical user interfaces ("GUIs") for customer self-service search and retrieval

7   systems. Customer search and retrieval may include knowledge management systems, information

8   portals, search engines, and data miners. Providing efficient and satisfactory search results using

9   such systems requires that users provide relevant contextual information in conjunction with a search

10 query. At the time of the invention, engineers attempted to solve this problem through the use of

11 GUIs, which represented available applications and datasets via icons. However, these prior art

12 GUIs failed to address the full range of relevant contextual variables for user queries, and also did

13 not provide a graphical method for fine tuning the relevant context variables.

14   26.   The inventors of the '193 patent thus recognized a need to provide an improved GUI

15 for customer search and retrieval functions to facilitate the efficient location of relevant resources in

16 response to a query by enabling the expression of a user's context as part of the query and indicating

17 the relevance of returned results in that context. The inventors of the '193 patent developed systems

18 and methods of using user context attributes and GUIs to allow users to search for content and

19 subsequently narrow the results based on user context to obtain increased specificity and accuracy

20 in search results. The patented technology of the '193 patent provides for more efficient search and

21 retrieval in part through a novel iconic GUI that enables the expression of a user's context as part of

22 the user query, which has the benefit of minimizing user time and resource intensive system

23 processes. For example, the most efficient search processes of the '193 patent reduce the server

24 processing steps required to provide relevant search results and thus allow the server to process

25 search queries faster.

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E.   IBM Invented Methods For Improving Searching Using Real-Time Incorporation Of Contextual Information.

27.   The inventors of the '676 patent developed the patented technology as part of IBM's efforts to improve search mechanisms for customer self-service search and retrieval systems. Customer self-service search and retrieval systems may include knowledge management systems, information portals, search engines, and data miners. Providing efficient and satisfactory search results using such systems could be improved by incorporating relevant contextual information about the user. At the time of the invention, conventional customer self-service search and retrieval systems required users to input their contextual information when conducting each search query. However, these prior art search mechanisms failed to utilize the contextual information to rank search results and did not change these rankings over time, even as the user's contextual information changed. The prior art search mechanisms ranked search results without adapting to the current state of the user's interactions with the system and, therefore, failed to prioritize the search results most relevant to the user.

28.   The inventors of the '676 patent recognized a need for an improved method of annotating and ranking search results in real-time using up-to-date contextual information about the user. The inventors of the '676 patent developed systems and methods of classifying a user's context—by using a search query and raw contextual information inputted by the user and comparing this information against both the interaction history of the user and data from a context attribute database—to generate a set of context parameters that are specific to the current user. The technology of the '676 patent also provides for more efficient retrieval of search results through the use of an adaptive algorithm, which maps specific search results not only to the user's search query, but also to a user context vector containing the context parameters for the user. Moreover, the technology of the '676 patent comprises systems and methods for generating a more specific, accurate, and personalized set of search results using an ordering and annotation function which

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1   ranks the search results based on the user context, and is executed interactively, each time that a user

2   inputs a new search query. The invention of the '676 patent applies machine learning technology to

3   the customer self-service system using a combination of supervised and unsupervised logic, thereby

4   enabling the system to adapt how it ranks resources in accordance with a user's changing context,

5   without requiring the user to explicitly input contextual information. The systems and methods of

6   the '676 patent provide for a more efficient search and retrieval process, which greatly reduces the

7   user time and resource intensive system processes required to provide relevant search results.

8   **F.   IBM Invented Methods Of Stacking Portlets In Portal Pages.**

9   29.   The inventors of the '234 patent developed the patented technology as part of IBM's

10   efforts to improve customizable portal pages. Unlike traditional off-line media, portal pages on

11   computer screens, tablets, mobile devices, and other media allow the display of dynamically updated

12   information aggregated from different sources based on user preferences. A portal page may be

13   comprised of individual portlets, which access hardware and software to gather data and offer

14   information to portal pages. Portals and portlets can be associated with preferences selected by the

15   user and thus can provide an effective mechanism to view information of interest from a variety of

16   sources at the same time. However, as the number of portlets increase, portal pages can become

17   overcrowded and disorganized. In the prior art, overcrowding resulted in cluttered portal pages that

18   inhibited the user from effectively viewing and interacting with all of the available portlets. That

19   problem was unique to computer systems, because unlike traditional media, such as newspapers,

20   magazines, and books, portals and portlets are not limited to predetermined content, information

21   sources, or static areas of display.

22   30.   The inventors of the '234 patent recognized a need to improve the customization of

23   portal pages. They developed a novel approach for organizing and displaying stackable portlets on

24   a portal page. That method includes determining whether a subset of portlets is stackable and

25   providing a control means for the user to select between subsets of portlets not currently presented

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1   to the user. By developing a method for stacking subsets of portlets and allowing users to select

2   which subset to display, the inventors resolved the issue of the cluttered portal page with a new and

3   improved way of organizing and displaying the portlets comprising portal pages. The '234 patent

4   thus extends the benefits of portal pages by allowing users to interact effectively with portal pages

5   and generate as many portlets as they prefer—without overcrowding their device screens.

6   Specifically, the '234 patent discloses and claims novel methods of organizing portlets not only as

7   "stacks" but as "stacks of stacks," such that only a subset of portlets may be presented at any given

8   time, based on characteristics such as common hardware, software, content type, markup, user

9   profiles, and user preferences.

10   **G.   IBM Invented Methods, Frameworks, and Program Products For Formatting And**

11   **Serving Web Content.**

12   31.   The inventors of the '414 patent developed the patented technology as a way to

13   improve web development by simplifying the display of dynamic content. Prior to the '414 patent,

14   web developers who wished to embed dynamic content on their websites would typically embed a

15   URL that called to a JavaScript library to add in the dynamic content. The dynamically generated

16   JavaScript library contained the content to be displayed and provided a function to embed that

17   content directly on to the page. A web developer could adjust the look and feel of the website by

18   using cascading style sheets (CSS), but this approach was very limited on the type of formatting that

19   could be performed on the data. Web developers were thus essentially restricted by the formatting

20   provided by the JavaScript library that they called. If the developer wanted different formatting,

21   then he or she was required to create a new dynamically generated JavaScript library that contained

22   the new functions and the content to perform the desired formatting. Thus, developers were required

23   to create a new dynamically generated JavaScript library for each different format they may desire,

24   even if it was passing the same content. Having to develop multiple JavaScript libraries led to several

25   problems. First, it was time consuming to design and create each of the dynamically generated

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1   JavaScript libraries. Second, each dynamically generated JavaScript library had to be able to

2   interface with the various backend systems that provide the data, leading to an increase in network

3   traffic and use of bandwidth on the backend systems. And third, as the number of versions of the

4   dynamically generated JavaScript libraries increased, due to either variations of the content or the

5   formatting, the burden of maintaining, storing, finding, and constantly updating those libraries

6   increased as well.

7   32.   The inventors of the '414 patent addressed these problems by separating the dynamic

8   data from the formatting functions. The inventors realized that if they generated the dynamic data

9   as a set of JavaScript objects without any HTML formatting, they could pass the data as a parameter

10 to a set of JavaScript functions which provide the formatting. This allowed for a more efficient

11 approach for serving dynamic content because the one set of JavaScript objects can be formatted by

12 different sets of JavaScript functions based on the type of formatting required. Conversely, one set

13 of JavaScript functions can format different sets of JavaScript objects depending on the type of

14 content that is to be served. This approach had several advantages. The JavaScript functions could

15 be static, rather than dynamic, because they were taking, as input, the dynamic JavaScript data. The

16 JavaScript data and the functions could also be stored on different servers since they were no longer

17 tied together.   Furthermore, the JavaScript functions and the JavaScript data can be updated

18 independent of each other; thus, if there is a change in the content of the data, the new approach

19 would not require updating the set of JavaScript functions. Additionally, a new set of JavaScript

20 functions did not need to be created for each content type and format type; rather, a single set of

21 JavaScript functions could be developed to provide the desired format for all types of dynamic

22 JavaScript content. Thus, if a developer wants different formatting, the developer only needs to

23 create one new set of JavaScript functions, as opposed to developing several JavaScript libraries to

24 format each set of content that may be served. Lastly, this would also lead to a reduction in the

25 amount of database space needed to store the content and the functions, as each combination of

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content and formatting need not be stored as a unique JavaScript library. By separating the dynamic JavaScript data from the functions that format that data, the inventors of the '414 patent greatly increased web developers' degree of formatting flexibility.

H.   IBM Invented Integrated Metadata From Applications Used For Social Networking Into A Customer Relationship Management (CRM) System

33.   The inventor of the '168 patent developed the patented technology as a way of improving the capability of CRM systems to target customers. CRM systems are used by companies to gather, organize, automate, and synchronize sales information that is then used to target various customers. In order to better target customers, CRM systems must be able to quickly gather and analyze data that contain relevant detail with regard to user behavior and interactions. The information received is then used to derive and present business opportunities to companies, allowing them to better target customers. Though prior art CRM systems had existed before the patented invention, they were inadequate because they were not populated quickly enough with the most up-to-date information about potential customers. By not being able to gather recent customer information, companies using these prior art CRM systems failed to target customers as soon as those customers had a possible interest or need for the companies' products or services.

34.   The inventors of the '168 patent address this failure of prior art CRM systems by developing a method to integrate metadata from applications used for social networking into a CRM system. Applications used for social networking are typically Internet-based computer programs that comprise of users with a common interest who tend to communicate and share their thoughts openly and spontaneously. The metadata from these applications are ripe with details of the needs, behaviors, relationships, and tendencies of users. By teaching the integration of such metadata into a CRM system, the inventors of the '168 patent ensure that the CRM system adequately gathers the most up-to-date information about potential customers. To ensure that this metadata is used to better target customers, the inventors of the '168 patent further teach analyzing this metadata to derive

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1   valuable inferences such as opportunities, relationships, and user expertise, which is then used to

2   identify and manage potential customers in the CRM system.   By teaching the integration of

3   metadata from applications of social networks to identify and manage potential customers, the

4   inventors of the '168 patent greatly improved the targeting capabilities of CRM systems.

5   **I.   Zillow Has Built Its Business By Infringing IBM's Patents.**

6   35.   Zillow Group and its subsidiaries have grown rapidly over the last several years and

7   now have over two billion dollars of annual revenue.

8   36.   Zillow appropriated the inventions of the Patents-in-Suit to grow its business.

9   Zillow's websites (including at least www.zillow.com) and mobile applications (including at least

10 the iOS and Android Zillow Real Estate & Rentals, Zillow Rentals, and Zillow Premier Agent

11 applications) use the technology claimed by the Patents-in-Suit to provide customers with access to

12 real estate listings, provide Zillow's Business-to-Business services, provide advertisements and

13 other services to real estate agents (including at least Promoted Communities and Premier Agent),

14 and buy, service, advertise, and provide properties through Zillow Offers.

15   37.   Zillow refuses to negotiate a license agreement to end its unauthorized use of IBM's

16 intellectual property.   Instead, Zillow has adopted a policy of willful blindness and has informed

17 IBM that it will not "acknowledge or respond" to evidence of infringement.

18   38.   On August 26, 2019, IBM informed Zillow that IBM was investigating whether

19 Zillow infringed the '234 patent. Zillow did not acknowledge or respond to notice of the '234 patent.

20   39.   On November 25, 2019, IBM informed Zillow that it infringed the '193 patent, the

21 '676 patent, and the '414 patent. IBM also informed Zillow that IBM had confirmed that Zillow

22 infringed the '234 patent.   IBM attached claim charts providing detailed evidence of Zillow's

23 infringement of those patents. Copies of the claim charts are attached hereto as Exhibits 3, 5, 7,

24 and 9.

25   40.   On November 27, 2019, Zillow responded to the notice of its infringement by stating

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1   that IBM's letter was "a distraction from Zillow's defense of the lawsuit that IBM has filed." Zillow

2   told IBM that "[g]oing forward, Zillow will not acknowledge the receipt of further unsolicited charts,

3   or otherwise respond to claims of infringement by IBM that are not presented in a well-pleaded

4   complaint."

5   41.   On December 2, 2019, IBM reminded Zillow that "Zillow cannot avoid the

6   consequences of its conduct by remaining willfully blind to evidence of infringement." IBM then

7   urged Zillow to reconsider its position: "We hope that Zillow will reconsider its policy of refusing

8   to acknowledge or otherwise respond to evidence of infringement."

9   42.   Zillow did not acknowledge or respond to IBM's December 2, 2019 email.

10   43.   On December 12, 2019, IBM informed Zillow that it infringed the '168 patent. IBM

11   attached a claim chart providing detailed evidence of infringement of that patent. A copy of the

12   claim chart is attached hereto as Exhibit 11.

13   44.   Zillow did not acknowledge or respond to IBM's December 12, 2019 email.

14   45.   Zillow has no justification for refusing to engage with IBM. In fact, Zillow has not

15   even attempted to justify its unauthorized use of IBM's patented inventions.

16   46.   Zillow's policy of refusing to acknowledge or respond to notice of infringement

17   constitutes willful infringement.

18   **COUNT ONE**

19   **INFRINGEMENT OF THE '193 PATENT**

20   47.   IBM incorporates by reference paragraphs 1-46.

21   48.   IBM is the owner of all right, title, and interest in the '193 patent. The '193 patent

22   was duly and properly issued by the USPTO on August 17, 2004. The '193 patent was duly assigned

23   to IBM. A copy of the '193 patent is attached hereto as Exhibit 2.

24   49.   In violation of 35 U.S.C. § 271(a), Zillow has directly infringed one or more of the

25   claims of the '193 patent by having made, designed, offered for sale, sold, provided, used,

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1   maintained, and/or supported its websites (including www.zillow.com) and its mobile applications

2   (including the Zillow applications for mobile devices running on, for example, the Apple iOS and

3   Google Android operating systems). Alternatively, Zillow has contributed to the infringement of

4   one or more of the claims of the '193 patent in violation of 35 U.S.C. § 271(c) by selling, offering

5   to sell, and/or supplying components, materials, or apparatuses for use in practicing the patented

6   methods of the '193 patent by end users and consumers, as described below. Alternatively, Zillow

7   has induced others, including end users and customers, to infringe one or more of the claims of the

8   '193 patent in violation of 35 U.S.C. § 271(b), as described below. Zillow's infringement is

9   continuing.

10   50.   For example, as shown in Exhibit 3, Zillow directly infringes at least claim 1 of the

11   '193 patent through www.zillow.com and the Zillow mobile applications at least by:

12   a.   Providing a graphical user interface (such as the Zillow GUI) for a customer self

13   service system (such as the Zillow website) that performs resource search and

14   selection (such as allowing users to select and search for homes) comprising:

15   b.   a first visual workspace (such as the initial Zillow search/query screen)

16   comprising entry field enabling entry of a query for a resource (such as the query

17   fields on the initial Zillow search/query screen) and, one or more selectable

18   graphical user context elements (such as the search options in the Zillow

19   search/query screen), each element representing a context associated with the

20   current user state and having context attributes and attribute values (such as the

21   values associated with the aforementioned context attributes) associated

22   therewith;

23   c.   a second visual workspace for visualizing (such as the Zillow search results page)

24   the set of resources that the customer self service system has determined to match

25   the user's query (such as each search result displayed on the search results page),

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said system indicating a degree of fit of said determined resources with said query (such as the sort order of the search results displayed on the search results page);

d.   a third visual workspace (such as the Zillow search results map) for enabling said user to select and modify context attribute values to enable increased specificity and accuracy of a query's search parameters (such as by zooming in or out on the map), said visual workspace further enabling said user to specify resource selection parameters and relevant resource evaluation criteria (such as the geographic boundaries of a search) utilized by a search mechanism in said system (such as the Zillow search system), said degree of fit indication based on said user's context, and said associated resource selection parameters and relevant resource evaluation criteria (such as the sort order of the search results displayed on the search results page); and,

e.   a mechanism enabling said user to navigate among said first, second and third visual workspaces to thereby identify and improve selection logic and response sets fitted to said query (such as the user's cursor on the Zillow GUI).

51.   Zillow has had knowledge of the '193 patent and its alleged direct and indirect infringement since November 25, 2019, based on communications with IBM.

52.   Zillow also indirectly infringes one or more claims of the '193 patent through its websites (including www.zillow.com) and the Zillow mobile applications (including the Zillow applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems). On information and belief, in certain circumstances, client devices and software (e.g., devices and software used by end users and customers of Zillow's website and the associated mobile application) directly infringe the '193 patent through the use of the website and mobile applications.

53.   On information and belief, despite knowledge of the infringement of the '193 patent,

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1   Zillow intended and continues to intend to contribute to patent infringement by third parties by

2   selling, offering to sell, and/or supplying components, materials, or apparatuses for use in practicing

3   the patented methods of the '193 patent by end users and consumers, as described in this section.

4   54.   For example, Zillow provides computer code (such as HTML, JavaScript, JSON, and

5   image files) underlying the Zillow website and mobile applications that are sent to customers and

6   end users for use in infringing the '193 patent, and such computer code does not have substantial

7   non-infringing uses. Such computer code is especially made and/or especially adopted for use in

8   infringing the '193 patent and is not a staple article or commodity of commerce suitable for

9   substantial non-infringing use. The only substantial use of such computer code is for the claimed

10 subject matter involving a search GUI comprising the visual workspaces claimed by the '193 patent.

11   55.   Further, as part of providing said computer code, Zillow enters into binding contracts

12 with end users and customers to use Zillow's website and mobile applications, including in an

13 infringing manner, including by binding the users to a terms of service governing access to and use

14 of the accused website and mobile applications.

15   56.   Zillow receives valuable consideration from customers and end users located in this

16 judicial district, including information provided by customers and end users, information

17 automatically collected from customers and end users, and monetary consideration from customers

18 and end users who contact real estate agents and homeowners through Zillow's website and mobile

19 applications. When customers and end users in this judicial district used the accused website and/or

20 mobile applications, Zillow collects information about the customers and end users, their devices,

21 and their interaction with the accused website and the associated mobile applications. Zillow works

22 with service providers and advertising networks to track and manage cookie information and

23 activities of customers and end users across different websites and devices. Third parties use cookie

24 information collected by Zillow to deliver advertisements to end users and customers based on their

25 use of the accused website and mobile applications. Zillow's business is funded through advertising.

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The applications and website are especially made and/or especially adapted for use in infringing the Patents-In-Suit, at least as detailed in the individual Counts herein, and are not a staple article or commodity of commerce suitable for substantial non-infringing uses because, among other things, the components sent to users are uniquely designed only to access the infringing aspects of Zillow's website and mobile applications.

57.   On information and belief, despite its knowledge of the infringement of the '193 patent, Zillow has intended and continues to intend to induce patent infringement by third parties, including at least the direct infringement by end users and customers, as described in this section. Zillow has and continues to encourage and instruct customers and end users to use Zillow's website and the associated mobile applications in a manner that infringes the '193 patent by advertising the website and mobile applications, providing customer support, and designing its website and mobile applications in such a way that the use of the website and mobile applications by an end user or customer infringes the '193 patent.

58.   On information and belief, to the extent Zillow was not aware that it was encouraging its customers and end users to infringe the '193 patent, its lack of knowledge was based on being willfully blind to the possibility that its acts would cause infringement.

59.   IBM has been damaged by the infringement of the '193 patent by Zillow. IBM is entitled to recover from Zillow the damages sustained by IBM as a result of Zillow's wrongful acts.

60.   The infringement by Zillow of the '193 patent was deliberate and willful, entitling IBM to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

61.   IBM has suffered and continues to suffer irreparable harm, for which there is no adequate remedy at law, and will continue to do so unless Zillow is enjoined therefrom by this Court.

1

COUNT TWO

2

INFRINGEMENT OF THE '676 PATENT

3   62.   IBM incorporates by reference paragraphs 1-61.

4   63.   IBM is the owner of all right, title, and interest in the '676 patent. The '676 patent

5 was duly and properly issued by the USPTO on August 31, 2004. The '676 patent was duly assigned

6 to IBM. A copy of the '676 patent is attached hereto as Exhibit 4.

7   64.   In violation of 35 U.S.C. § 271(a), Zillow has directly infringed one or more of the

8 claims of the '676 patent by having made, designed, offered for sale, sold, provided, used,

9 maintained, and/or supported its websites (including www.zillow.com) and its mobile applications

10 (including the Zillow applications for mobile devices running on, for example, the Apple iOS and

11 Google Android operating systems). Alternatively, Zillow has contributed to the infringement of

12 the claims of the '676 patent in violation of 35 U.S.C. § 271(c) by selling, offering to sell, and/or

13 supplying components, materials, or apparatuses for use in practicing the patented methods of the

14 '676 patent by end users and consumers, as described in this section. Alternatively, Zillow has

15 induced others, including end users and customers, to infringe one or more of the claims of the '676

16 patent in violation of 35 U.S.C. § 271(b), as described below. Zillow's infringement is continuing.

17   65.   For example, as shown in Exhibit 5, Zillow directly infringes at least claim 14 of the

18 '676 patent through www.zillow.com and the Zillow mobile applications at least by:

19   a.   receiving a resource response set of results (such as search result listings for the

20   similar home carousel on each home details page) obtained in response to a

21   current user query (such as a search for home listings submitted by a user);

22   b.   receiving a user context vector (such as a set of data associated with a specific

23   user) associated with said current user query (such as the user's current search on

24   Zillow's website or mobile application), said user context vector comprising data

25   associating an interaction state with said user (such as a short-term history set of

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a user) and including context that is a function of the user (such as data classifying the user);

    c.   applying an ordering and annotation function for mapping the user context vector with the resource response set (such as Zillow's algorithm for ranking home listings) to generate an annotated response set having one or more annotations (such as a JSON array comprising the ordered set of listings to be included in the similar home carousel); and,

    d.   controlling the presentation of the resource response set to the user according to said annotations (such as presenting the similar home carousel on the Zillow website or mobile applications), wherein the ordering and annotation function is executed interactively at the time of each user query (such as Zillow executing the algorithm whenever a user selects a listing).

66. Zillow has had knowledge of the '676 patent and its alleged direct and indirect infringement since November 25, 2019, based on communications with IBM.

67. Zillow also indirectly infringes one or more claims of the '676 patent through its websites (including www.zillow.com) and its mobile applications (including the Zillow applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems). On information and belief, in certain circumstances, client devices and software (e.g., devices and software used by end users and customers of Zillow's website and the associated mobile applications) directly infringe the '676 patent through the use of the website and mobile applications. In particular, to the extent Zillow does not perform the method steps, in certain circumstances, client devices and software (e.g., devices and software used by end users, customers, and potential customers of Zillow's website and the associate mobile applications) perform at least the method of annotating resource results recited by claim 14 of the '676 patent.

68. On information and belief, despite knowledge of the infringement of the '676 patent,

1   Zillow has intended and continues to intend to contribute to patent infringement by third parties by

2   selling, offering to sell, and/or supplying components, materials, or apparatuses for use in practicing

3   the patented methods of the '676 patent by end users and consumers, as described in this section.

4   69.   For example, Zillow provides computer code (such as HTML, JavaScript, and image

5   files) underlying the Zillow website and mobile applications to customers and end users for use in

6   infringing the '676 patent, and such computer code does not have substantial non-infringing uses.

7   Such computer code is especially made and/or especially adapted for use in infringing the '676 patent

8   and is not a staple article or commodity of commerce suitable for substantial non-infringing use.

9   The only substantial use of Zillow's computer code responses is for the claimed subject matter

10   involving annotating resource results obtained in a customer self-service system that performs

11   resource search and selection as described in the '676 patent.

12   70.   Further, as a part of providing said computer code, Zillow enters into binding

13   contracts with end users and customers to use Zillow's website and mobile applications, including

14   in an infringing manner, including by binding the users to a terms of service governing access to and

15   use of the accused website and mobile applications.

16   71.   Zillow receives valuable consideration from customers and end users located in this

17   judicial district, including information provided by customers and end users, information

18   automatically collected from customers and end users, and monetary consideration from customers

19   and end users who contact real estate agents and homeowners through Zillow's website and mobile

20   applications. When customers and end users in this judicial district use the accused website and/or

21   mobile applications, Zillow collects information about the customers and end users, their devices,

22   and their interaction with the accused website and the associated mobile applications. Zillow works

23   with service providers and advertising networks to track and manage cookie information and

24   activities of customers and end users across different websites and devices. Third parties use cookie

25   information collected by Zillow to deliver advertisements to end users and customers based on their

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use of the accused website and mobile applications. Zillow's business is funded through advertising. The applications and website are especially made and/or especially adapted for use in infringing the Patents-In-Suit, at least as detailed above, and are not a staple article or commodity of commerce suitable for substantial non-infringing uses because, among other things, the components sent to users are uniquely designed only to access the infringing aspects of Zillow's website and mobile applications.

72.   On information and belief, despite its knowledge of the infringement of the '676 patent, Zillow has intended and continues to intend to induce patent infringement by third parties, including at least the direct infringement by end users and customers, as described in this section. Zillow has and continues to encourage and instruct customers and end users to use Zillow's website and the associated mobile applications in a manner that infringes the '676 patent by advertising the website and mobile applications, providing customer support, and designing its website and mobile applications in such a way that the use of the website and mobile applications by an end user or customer infringes the '676 patent.

73.   On information and belief, to the extent Zillow was not aware that it was encouraging its customers and end users to infringe the '676 patent, its lack of knowledge was based on being willfully blind to the possibility that its acts would cause infringement.

74.   IBM has been damaged by the infringement of the '676 patent by Zillow. IBM is entitled to recover from Zillow the damages sustained by IBM as a result of Zillow's wrongful acts.

75.   The infringement by Zillow of the '676 patent was deliberate and willful, entitling IBM to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

76.   IBM has suffered and continues to suffer irreparable harm, for which there is no adequate remedy at law, and will continue to do so unless Zillow is enjoined therefrom by this Court.

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COUNT THREE

INFRINGEMENT OF THE '234 PATENT

77.   IBM incorporates by reference paragraphs 1-76.

78.   IBM is the owner of all right, title, and interest in the '234 patent. The '234 patent was duly and properly issued by the USPTO on June 2, 2009. The '234 patent was duly assigned to IBM. A copy of the '234 patent is attached hereto as Exhibit 6.

79.   In violation of 35 U.S.C. § 271(a), Zillow has directly infringed one or more of the claims of the '234 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its websites (including www.zillow.com) and its mobile applications (including the Zillow applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems). Zillow's infringement is continuing.

80.   For example, as shown in Exhibit 7, Zillow directly infringes at least claim 1 of the '234 patent through www.zillow.com and the Zillow mobile applications at least by:

   a. generating a portal page (such as the Zillow search results page), wherein the portal page includes a plurality of portlets (such as each home listing displayed on the search results page), the method comprising:

   b. determining whether a subset of portlets is stackable (such as organizing the individual home listings into pages of featured results based on content type); and,

   c. responsive to the subset of portlets being stackable, identifying two or more stacks of portlets that are stackable (such as price (low to high), homes for you, price (high to low), newest, bedrooms, bathrooms, square feet, lot size, Zestimate (high to low), or Zestimate (low to high) search results), and

   d. generating the portal page (such as the Zillow search results page) such that the two or more stacks of portlets are generated as a stack of stacks, wherein the stack of stacks presents a first stack of portlets (such as the display of home listings

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initially presented to the user) and a control for selecting a second stack of portlets

from within the two or more stacks of portlets that is not currently presented (such

as providing the means for the user to select other stacks of portlets not currently

presented to the user, such as price (low to high), homes for you, price (high to

low), newest, bedrooms, bathrooms, square feet, lot size, Zestimate (high to low),

or Zestimate (low to high)).

81.   Zillow has had knowledge of the '234 patent and its alleged direct and indirect infringement since August 26, 2019, based on communications with IBM.

82.   IBM has been damaged by the infringement of the '234 patent by Zillow. IBM is entitled to recover from Zillow the damages sustained by IBM as a result of Zillow's wrongful acts.

83.   The infringement by Zillow of the '234 patent was deliberate and willful, entitling IBM to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

84.   IBM has suffered and continues to suffer irreparable harm, for which there is no adequate remedy at law, and will continue to do so unless Zillow is enjoined therefrom by this Court.

COUNT FOUR

INFRINGEMENT OF THE '414 PATENT

85.   IBM incorporates by reference paragraphs 1-84.

86.   IBM is the owner of all right, title, and interest in the '414 patent. The '414 patent was duly and properly issued by the USPTO on February 14, 2017. The '414 patent was duly assigned to IBM. A copy of the '414 patent is attached hereto as Exhibit 8.

87.   In violation of 35 U.S.C. § 271(a), Zillow has directly infringed one or more of the claims of the '414 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its websites (including www.zillow.com) and its mobile applications (including the Zillow applications for mobile devices running on, for example, the Apple iOS and

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1   Google Android operating systems). Alternatively, Zillow has contributed to the infringement of

2   one or more of the claims of the '414 patent in violation of 35 U.S.C. § 271(c) by selling, offering

3   to sell, and/or supplying components, materials, or apparatuses for use in practicing the patented

4   methods of the '414 patent by end users and consumers, as described below. Alternatively, Zillow

5   has induced others, including end users and customers, to infringe one or more of the claims of the

6   '414 patent in violation of 35 U.S.C. § 271(b), as described below. Zillow's infringement is

7   continuing.

8   88.   For example, as shown in Exhibit 9, Zillow directly infringes at least claim 1 of the

9   '414 patent through www.zillow.com and the Zillow mobile applications at least by:

10   a.   requesting a set of JavaScript objects (such as the JSON representing property

11   search results) and a set of JavaScript functions (such as the JavaScript functions

12   like those from s.zillowstatic.com) in a single Hypertext Transfer Protocol

13   (HTTP) request (such as a HTTP request requesting property search results):

14   b.   in response to the requesting: obtaining the set of JavaScript objects (such as

15   obtaining the JSON representing property search results) that represents dynamic

16   JavaScript data (such as the price and statusType for each property responsive to

17   the property search);

18   c.   obtaining the set of JavaScript functions (such as obtaining the JavaScript

19   functions like those from s.zillowstatic.com) to format the set of JavaScript

20   objects, the set of JavaScript objects being distinct from the set of JavaScript

21   functions (the JavaScript objects represented by the JSON is distinct from the

22   JavaScript functions like those from s.zillowstatic.com); and

23   d.   formatting the set of JavaScript objects using the set of JavaScript functions as a

24   parameter (such as formatting the objects in the JSON using the JavaScript

25   functions like those from s.zillowstatic.com); and

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e.   outputting at least a subset of the set of JavaScript objects in a format determined by the set of JavaScript functions (such as the HTML that displays the property search results page).

89.   Alternatively, to the extent the "requesting" step is performed by a third party (in addition to and/or separate from Zillow's performance), such as a user, browser, or mobile operating system, that performance is attributable to Zillow at least because Zillow has an agency or contractual relationship with said third party, or Zillow controls or directs the performance of said third party. For example, Zillow controls or directs the performance of the "requesting" step by users, browsers, and mobile operating systems because it, for example, conditions receipt of a benefit, such as access to certain content on Zillow's website and mobile applications, on the performance of the claimed steps, and establishes the manner or timing of the performance by, for example, requesting a set of JavaScript objects and a set of JavaScript functions using its underlying computer code. For another example, Zillow controls or directs the performance of the "requesting" step by users, browsers, and mobile operating systems because it profits from the performance by, for example, increasing the number of properties accessed on Zillow's website and mobile applications. Zillow has the right to stop or limit infringement, by, for example, not sending JavaScript objects or JavaScript functions to the users, browsers, or mobile operating systems.

90.   Alternatively, to the extent the "formatting" step is performed by a third party (in addition to and/or separate from Zillow's performance), such as a user, browser, or mobile operating system, that performance is attributable to Zillow at least because Zillow has an agency or contractual relationship with said third party, or Zillow controls or directs the performance of said third party. For example, Zillow controls or directs the performance of the "formatting" step by users, browsers, and mobile operating systems because it, for example, conditions receipt of a benefit, such as access to certain content on Zillow's website and mobile applications, on the performance of the claimed steps, and establishes the manner or timing of the performance by, for

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example, designing and generating the JavaScript and the JSON files, which comprise www.zillow.com and the Zillow mobile applications. For another example, Zillow controls or directs the performance of the "formatting" step by users, browsers, and mobile operating systems because it profits from the performance by, for example, increasing use and user interactions by improving the manner that properties are displayed. Zillow has the right to stop or limit infringement, by, for example, redesigning the JavaScript and JSON files of www.zillow.com and the Zillow mobile applications to function in a non-infringing manner.

91.   Alternatively, to the extent the "outputting" step is performed by a third party (in addition to and/or separate from Zillow's performance), such as a user, browser, or mobile operating system, that performance is attributable to Zillow at least because Zillow has an agency or contractual relationship with said third party, or Zillow controls or directs the performance of said third party. For example, Zillow controls or directs the performance of the "outputting" step by users, browsers, and mobile operating systems because it, for example, conditions receipt of a benefit, such as access to certain content on Zillow's website and mobile applications, on the performance of the claimed steps, and establishes the manner or timing of the performance by, for example, designing and generating the HTML and the JavaScript files of www.zillow.com and the Zillow mobile applications. For another example, Zillow controls or directs the performance of the "outputting" step by users, browsers, and mobile operating systems because it profits from the performance by, for example, increasing the number of properties accessed on Zillow's website and mobile applications by displaying the properties in an efficient manner. Zillow has the right to stop or limit infringement, by, for example, redesigning the HTML and the JavaScript files of www.zillow.com and the Zillow mobile applications to function in a non-infringing manner.

92.   Zillow has had knowledge of the '414 patent and its alleged direct and indirect infringement since November 25, 2019, based on communications with IBM.

93.   Zillow also indirectly infringes one or more claims of the '414 patent through its

websites (including www.zillow.com) and the Zillow mobile applications (including the Zillow applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems, including at least Zillow Real Estate & Rentals, Zillow Rentals, and Zillow Premier Agent applications). On information and belief, in certain circumstances, client devices and software (e.g., devices and software used by end users and customers of Zillow's website and the associated mobile applications) directly infringe the '414 patent through the use of the website and mobile applications. In particular, to the extent Zillow does not perform the method steps, in certain circumstances, client devices and software (e.g., devices and software used by end users, customers, and potential customers of Zillow's website and the associated mobile applications) perform at least the method of formatting and serving web content recited by claim 1 of the '414 patent.

94.   On information and belief, despite knowledge of the infringement of the '414 patent, Zillow intended and continues to intend to contribute to patent infringement by third parties by selling, offering to sell, and/or supplying components, materials, or apparatuses for use in practicing the patented methods of the '414 patent by end users and consumers, as described in this section.

95.   For example, Zillow provides computer code (such as HTML, JavaScript, JSON, and image files) underlying the Zillow website and mobile applications that are sent to customers and end users for use in infringing the '414 patent, and such computer code does not have substantial non-infringing uses. Such computer code is especially made and/or especially adapted for use in infringing the '414 patent and is not a staple article or commodity of commerce suitable for substantial non-infringing use. The only substantial use of such computer code is for the claimed subject matter involving the formatting of JavaScript objects by JavaScript functions claimed by the '414 patent.

96.   Further, as a part of providing said computer code, Zillow enters into binding contracts with end users and customers to use Zillow's website and mobile applications, including in an infringing manner, including by binding the users to a terms of service governing access to and

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1   use of the accused website and mobile applications.

2   97.   Zillow receives valuable consideration from customers and end users located in this

3   judicial district, including information provided by customers and end users, information

4   automatically collected from customers and end users, and monetary consideration from customers

5   and end users who contact real estate agents and homeowners through Zillow's website and mobile

6   applications. When customers and end users in this judicial district use the accused website and/or

7   mobile applications, Zillow collects information about the customers and end users, their devices,

8   and their interaction with the accused website and the associated mobile applications. Zillow works

9   with service providers and advertising networks to track and manage cookie information and

10   activities of customers and end users across different websites and devices. Third parties use cookie

11   information collected by Zillow to deliver advertisements to end users and customers based on their

12   use of the accused website and mobile applications. Zillow's business is funded through advertising.

13   The applications and website are especially made and/or especially adapted for use in infringing the

14   Patents-In-Suit, at least as detailed in the individual Counts above, and are not a staple article or

15   commodity of commerce suitable for substantial non-infringing uses because, among other things,

16   the components sent to users are uniquely designed only to access the infringing aspects of Zillow's

17   website and mobile applications.

18   98.   On information and belief, despite its knowledge of the infringement of the '414

19   patent, Zillow has intended and continues to intend to induce patent infringement by third parties,

20   including at least the direct infringement by end users and customers, as described in this section.

21   Zillow has and continues to encourage and instruct customers and end users to use Zillow's website

22   and the associated mobile applications in a manner that infringes the '414 patent by advertising the

23   website and mobile applications, providing customer support, and designing its website and mobile

24   applications in such a way that the use of the website and mobile applications by an end user or

25   customer infringes the '414 patent.

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99.   On information and belief, to the extent Zillow was not aware that it was encouraging its customers and end users to infringe the '414 patent, its lack of knowledge was based on being willfully blind to the possibility that its acts would cause infringement.

100.   IBM has been damaged by the infringement of the '414 patent by Zillow. IBM is entitled to recover from Zillow the damages sustained by IBM as a result of Zillow's wrongful acts.

101.   The infringement by Zillow of the '414 patent was deliberate and willful, entitling IBM to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

102.   IBM has suffered and continues to suffer irreparable harm, for which there is no adequate remedy at law, and will continue to do so unless Zillow is enjoined therefrom by this Court.

COUNT FIVE

INFRINGEMENT OF THE '168 PATENT

103.   IBM incorporates by reference paragraphs 1-102.

104.   IBM is the owner of all right, title, and interest in the '168 patent. The '168 patent was duly and properly issued by the USPTO on October 30, 2018. The '168 patent was duly assigned to IBM. A copy of the '168 patent is attached hereto as Exhibit 10.

105.   In violation of 35 U.S.C. § 271(a), Zillow has directly infringed one or more of the claims of the '168 patent by having made, designed, offered for sale, sold, provided, used, maintained, and/or supported its websites (including www.zillow.com) and its mobile applications (including the Zillow applications for mobile devices running on, for example, the Apple iOS and Google Android operating systems). Zillow's infringement is continuing.

106.   For example, as shown in Exhibit 11, Zillow directly infringes at least claim 1 of the '168 patent through www.zillow.com and the Zillow mobile applications at least by:

a. obtaining, from applications used for social networking (such as Zillow's websites and mobile applications), metadata associated with users of the

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applications (such as activity on Zillow's website and mobile applications);

    b.   analyzing the metadata from the applications (such as activity on Zillow's website and mobile applications) to infer opportunities (such as homes a customer may like), relationships for mapping clients (such as relationships between Premier Agents and customers), structures (such as different lead types), and subject matter experts (such as a Premier Agent);

    c.   integrating the opportunities (such as homes a customer may like), the relationships for mapping the clients (such as relationships between Premier Agents and customers), the structures (such as different lead types), and the subject matter experts (such as a Premier Agent) into a customer relationship management (CRM) system (such as the Premier Agent App) to populate the CRM system;

    d.   identifying potential customers (such as potential home-buying or home-selling customers) based on integrated opportunities (such as homes a customer may like), relationships for mapping the clients (such as relationships between Premier Agents and customers), the structures (such as different lead types), and the subject matter experts (such as a Premier Agent); and

    e.   managing interactions with current and target customers (such as organizing, tracking, and responding to leads) based on the integrated opportunities (such as homes a customer may like), relationships for mapping the clients (such as relationships between Premier Agents and customers), the structures (such as different lead types), and the subject matter experts (such as a Premier Agent).

107.   Alternatively, to the extent the "managing" step is performed by a third party (in addition to and/or separate from Zillow's performance), such as a user, browser, or mobile operating system, that performance is attributable to Zillow at least because Zillow has an agency or

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1 contractual relationship with said third party, or Zillow controls or directs the performance of said

2 third party. For example, Zillow controls or directs the performance of the "managing" step by

3 users, browsers, and mobile operating systems because it, for example, conditions receipt of a

4 benefit, such as contact between a Premier Agent and a user on Zillow's website and mobile

5 applications, on the performance of the claimed steps, and establishes the manner or timing of the

6 performance by, for example, its design of the capabilities and the user interface of the Premier

7 Agent App. For another example, Zillow controls or directs the performance of the "managing" step

8 by users, browsers, and mobile operating systems because it profits from the performance by, for

9 example, facilitating contact between Premier Agents and users on Zillow's website and mobile

10 applications. Zillow has the right to stop or limit infringement, by, for example, not enabling contact

11 between Premier Agents and users.

12   108.   Zillow has had knowledge of the '168 patent and its alleged direct and indirect

13 infringement since December 12, 2019, based on communications with IBM.

14   109.   IBM has been damaged by the infringement of the '168 patent by Zillow. IBM is

15 entitled to recover from Zillow the damages sustained by IBM as a result of Zillow's wrongful acts.

16   110.   The infringement by Zillow of the '168 patent was deliberate and willful, entitling

17 IBM to increased damages under 35 U.S.C. § 284 and to attorneys' fees and costs incurred in

18 prosecuting this action under 35 U.S.C. § 285.

19   111.   IBM has suffered and continues to suffer irreparable harm, for which there is no

20 adequate remedy at law, and will continue to do so unless Zillow is enjoined therefrom by this Court.

21 **RELIEF REQUESTED**

22   Wherefore, IBM respectfully requests that this Court enter judgment against Zillow as

23 follows:

24   A.   That the '193 patent has been infringed by Zillow;

25   B.   That Zillow's infringement of the '193 patent has been and continues to be willful;

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1 C. An injunction against further infringement of the '193 patent;

2 D. That the '676 patent has been infringed by Zillow;

3 E. That Zillow's infringement of the '676 patent has been and continues to be willful;

4 F. An injunction against further infringement of the '676 patent;

5 G. That the '234 patent has been infringed by Zillow;

6 H. That Zillow's infringement of the '234 patent has been and continues to be willful;

7 I. An injunction against further infringement of the '234 patent;

8 J. That the '414 patent has been infringed by Zillow;

9 K. That Zillow's infringement of the '414 patent has been and continues to be willful;

10 L. An injunction against further infringement of the '414 patent;

11 M. That the '168 patent has been infringed by Zillow;

12 N. That Zillow's infringement of the '168 patent has been and continues to be willful;

13 O. An injunction against further infringement of the '168 patent;

14 P. An award of damages adequate to compensate IBM for the patent infringement that

15 has occurred, together with pre-judgment interest and costs;

16 Q. An award of all other damages permitted by 35 U.S.C. § 284, including increased

17 damages up to three times the amount of compensatory damages found;

18 R. That this is an exceptional case and an award to IBM of its costs and reasonable

19 attorneys' fees incurred in this action as provided by 35 U.S.C. § 285; and

20 S. Such other relief as this Court deems just and proper.

21 **DEMAND FOR JURY TRIAL**

22 IBM hereby demands trial by jury on all claims and issues so triable.

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1   DATED this 21st day of July, 2020.

2   HARRIGAN LEYH FARMER & THOMSEN LLP

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